

## Alternative EX-2

Group  
**Water Supply**

Title  
**Small Isolated Transfer Facility**

This alternative focuses on decreasing entrainment of anadromous and Bay-Delta native fish and fish food, primarily through relocation of M&I export diversions. The new diversion location, by reducing the conveyance of water through the Delta to export pumps, increases the residence time of water in the Delta, improving aquatic habitat productivity. The relocated diversion also improves the water quality of SWP exports, and reduces constraints on M&I exports associated with entrainment of fish.

A small, isolated transfer facility is included to connect the relocated diversion to Clifton Court Forebay. The Clifton Court Forebay gates would normally be closed. The isolated facility essentially eliminates the vulnerability of M&I export supplies to catastrophic failure. Delta water quality is improved by reducing pollutant loading of the Delta via the San Joaquin River and through agricultural, industrial, and municipal wastewater reclamation and reuse. The vulnerability of Delta land use, Delta water supply, agricultural export water supply and Delta ecosystem function to catastrophic failure is reduced by improving levees throughout the Delta.

### Key Actions

***Habitat Restoration***—Restore riverine, riparian, wetland, and adjacent terrestrial habitat, and expand floodway habitat, channels, and meander belts in the Bay-Delta and upstream in rivers and tributaries to restore fish spawning, rearing, and feeding habitats and improve fish survival. A level of restoration involving setback levees, channel improvements, and shaded riverine habitat is focused on high priority sites (e.g. to form corridors of key habitat mosaics), and sites of high feasibility (e.g. along north Delta islands with relatively high interior surface elevations). The amount of in-Delta habitat restoration is smaller relative to that included in alternatives that maintain both M&I and agricultural export diversions at their current South Delta locations, and higher relative to that included in alternatives that relocate both M&I and agricultural export diversions.

***Construct Small Isolated Transfer Facility***—Transport water around the Delta from the new M&I diversion location to Clifton Court Forebay in a facility sized to meet export M&I needs (approximately 5,000 cfs; Southern California, Central Coast, and South Bay SWP contractors).

***Relocate Export Diversion Facilities to Sacramento River***—Provide M&I exporters access to higher quality water while reducing the entrainment effects of existing facilities by relocating export diversion facilities to the Sacramento River upstream of the Delta, near Hood for example. Provide best available technology fish screens. Real time monitoring is used to avoid entrainment of large concentrations of striped bass eggs and larvae, otherwise pumping could occur at any time.

***Levee Upgrades***—Provide landside buffer zones of at least 75 yards to minimize levee subsidence and improve levee maintenance and stabilization to at least hazard mitigation plan standards (HMP; a level of protection less than the 100-year flood) for islands providing valuable existing habitat, such as on Bradford Island. Improve levee maintenance and stabilization to at least National Flood Insurance Program standards (NFIP; 100-year flood protection) and to maximum credible earthquake standards (MCE) for all islands, such as Tyler and Mandeville, containing existing infrastructure and/or land use that provides economic benefit to the region. Improve levee maintenance and stabilization to at least Bulletin 192-82 or PL-99 standards (generally considerably more than 100-year flood protection) and to MCE standards for critical western Delta islands, such as Brannan-Andrus, Bethel, and Sherman, to reduce risk to critical infrastructure (e.g. Mokelumne Aqueduct, PG&E gas lines, Highway 160) and to reduce risk to export water quality from salinity intrusion due to levee failure. A levee management plan would provide necessary funding for ongoing maintenance and emergency funding and direction to reclaim Delta islands in the event of inundation in order to continue protection of Delta functions as an integrated resource system.

***Reclamation***—Reclaim agricultural, municipal, and industrial wastewater for a variety of uses, improving water quality by reducing wastewater discharges. Selectively retire land in the San Joaquin Valley to reduce pollutant loading of the Delta from the San Joaquin River.

## Preliminary Assessment

***Ecosystem Quality***—This alternative would substantially improve ecosystem quality through the reduction of diversion effects that occurs with the relocation and screening of M&I export diversions. The diversion relocation also increases residence time in the Delta, improving aquatic habitat productivity.

***Water Supply***—The relocated M&I export diversion reduces the constraints currently associated with entrainment of fish at the SWP export diversion, thereby improving M&I export water supply and reliability. M&I export diversion relocation also results in decreased “carriage water” requirements, making more water available for water supply and environmental uses.

***Water Quality***—This alternative improves M&I export water quality by relocating M&I diversions upstream of the Delta. Delta water quality is improved through reduction of pollutant loading from the San Joaquin River along with reclamation of agricultural, municipal, and industrial wastewater.

***System Vulnerability***—Relocating M&I export facilities outside of the Delta essentially eliminates the risk that operations will be interrupted by a failure of in-Delta facilities. In-Delta habitat restoration simultaneously provides better levees and protection for adjacent land uses. Improvement of the levees around Delta islands protects those islands as well as protecting in-Delta and agricultural export water supplies from salinity intrusion due to island failure.

### **Possible Variations**

Small isolated transfer facility constructed as a closed pipeline with multiple diversion points along the east side of the Delta. Full isolated transfer facility (15-20K cfs), isolated transfer facility for SWP water only (approximately 10K cfs).

### **Possible Supplemental Actions**

Construct a westside canal from Keswick Reservoir to reduce diversions from the upper Sacramento River and the fish passage problems at Red Bluff Diversion Dam. Improve Delta tidal habitats for Delta smelt. Construct in-Delta storage to provide operational flexibility at the CVP pumps and regulate Delta outflow for fish enhancement.